

CLAIMS

1. Polybenzazole fibers or filaments having a tensile strength retention of 85% or higher after exposed to an atmosphere of a temperature of 80°C and a relative humidity of 80% for 700 hours.

2. Polybenzazole fibers or filaments according to claim 1, characterized in that the fibers or filaments have a strength retention of 50% or higher when exposed to light from a xenon lamp for 100 hours.

3. Polybenzazole fibers or filaments according to claim 1, characterized in that the fibers or filaments contain in themselves an organic pigment having heat resistance as high as a thermal decomposition temperature of 200°C or higher, and soluble in a mineral acid.

4. Polybenzazole fibers or filaments according to claim 1, characterized in that the organic pigment contained in the fibers or filaments has group(s) of -N= and/or NH- in the molecule.

5. Polybenzazole fibers or filaments according to claim 1, characterized in that the organic pigment

contained in the fibers or filaments is any of perinones and/or perylenes.

6. Polybenzazole fibers or filaments according to
5 claim 1, characterized in that the organic pigment
contained in the fibers or filaments is any of
phthalocyanines.

7. Polybenzazole fibers or filaments according to
10 claim 1, characterized in that the organic pigment
contained in the fibers or filaments is any of
quinacridones.

8. Polybenzazole fibers or filaments according to
15 claim 1, characterized in that the organic pigment
contained in the fibers or filaments is any of dioxazines.

9. Polybenzazole staple fibers having a tensile
strength retention of 85% or higher after exposed to an
20 atmosphere of a temperature of 80°C and a relative humidity
of 80% for 700 hours.

10. A spun yarn comprising polybenzazole fibers or
filaments as at least one component, the spun yarn having a
25 tensile strength retention of 70% or higher after exposed

to an atmosphere of a temperature of 80°C and a relative humidity of 80% for 700 hours.

11. A cord for reinforcing rubber, comprising twisted
5 yarns of polybenzazole fibers or filaments, the cord having a tensile strength retention of 70% or higher after exposed to an atmosphere of a temperature of 80°C and a relative humidity of 80% for 700 hours.

10 12. A polybenzazole fiber sheet for reinforcing cement/concrete, having a tensile strength retention of 75% or higher after exposed to an atmosphere of a temperature of 80°C and a relative humidity of 80% for 700 hours.

15 13. A polybenzazole fiber rod for reinforcing cement/concrete, having a tensile strength retention of 75% or higher after exposed to an atmosphere of a temperature of 80°C and a relative humidity of 80% for 700 hours.

20 14. A composite material comprising polybenzazole fibers or filaments as at least one component, the composite material having a tensile strength retention of 75% or higher after exposed to an atmosphere of a temperature of 80°C and a relative humidity of 80% for 700
25 hours.

15. A sail cloth excellent in durability, comprising polybenzazole fibers or filaments, the sail cloth having a tensile strength retention of 80% or higher in the fiber axial direction, after exposed to an atmosphere of a temperature of 80°C and a relative humidity of 80% for 700 hours.

16. A high strength fiber rope comprising polybenzazole fibers or filaments, the fiber rope having a tensile strength retention of 85% or higher after exposed to an atmosphere of a temperature of 80°C and a relative humidity of 80% for 700 hours.

17. A knife proof vest comprising polybenzazole fibers or filaments at least one component, the knife proof vest having a tensile strength retention of 75% or higher after exposed to an atmosphere of a temperature of 80°C and a relative humidity of 80% for 700 hours.

18. A bullet proof vest comprising polybenzazole fibers or filaments at least one component, the bullet proof vest having a tensile strength retention of 75% or higher after exposed to an atmosphere of a temperature of 80°C and a relative humidity of 80% for 700 hours.